

**Summary Report for Individual Task**  
**091-94E-1402**  
**Repair Receiver-Transmitter RT-(\*)/ARC-164(V)(\*)**  
**Status: Approved**

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**Distribution Restriction:** Approved for public release; distribution is unlimited.

**Destruction Notice:** None

**Foreign Disclosure: FD5** - This product/publication has been reviewed by the product developers in coordination with the Fort Lee/CASCOM foreign disclosure authority. This product is releasable to students from all requesting foreign countries without restrictions.

**Condition:** In an operational environment, a non-mission capable RT-(\*)/ARC-164(V) has been turned in to your Shop for repair. Your supervisor has directed you to restore the receiver transmitter to operational status, given the following: Receiver-Transmitter RT-(\*)/ARC-164(V); Wattmeter, AN/URM-120; Signal Generator, SG-1112(V)1/U; RF Voltmeter, ME-426/U; Headset-Microphone , H-157A/AIC; Oscilloscope, AN/USM-488; Digital Multimeter, AN/USM-486; Test Facilities Kit, MK-994A/AR; Radio Test Set, AN/GRM-122; Distortion Analyzer, HP-399A; Variable Attenuator, CN-318/G; Power Supply, HP-6433B; Radio Set Control, C-9682A/ARC-164(V)(\*); Tool Kit,TK-105/G; Mixer HP 10514A CB-2343U; Attenuator, NARDA 766-30, 30-dB; static work station, NSN 4940-01-087-3458; TM 11-5821-356-23, TM 11-6625-3300-10, applicable repair parts; DA Form 2404, Equipment Inspection and Maintenance Worksheet; DA Form 2407, Maintenance Request; DA Pam 750-8, The Army Maintenance Management System (TAMMS) Users Manual; TB 385-4, Safety Requirements for Maintenance of Electrical and Electronic Equipmet and Local Standard Operating Procedure (SOP). This task should not be trained in MOPP 4.

**Standard:** Restore the receiver-transmitter to an operational status in accordance with references listed in the performance measures.

**Special Condition:** None

**Safety Risk:** Low

**MOPP 4:** Never

Task Statements
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**Cue:**

Your supervisor has directed you to restore the receiver transmitter to operational status.

**DANGER**

None

**WARNING**

Radio frequency electromagnetic radiation can cause fatal internal burns. It can literally "cook" internal organs and flesh. DO NOT touch or stand within 30 inches of antenna when the RT is keyed. If you feel the slightest warming effect while near this equipment, MOVE AWAY QUICKLY!

HIGH VOLTAGE is used in the radio. DEATH ON CONTACT can result. Observe the following safety precautions:

- If at all possible, work on the equipment only when another person is nearby, that person should be competent in CARDIOPULMONARY RESUSCITATION (CPR).
- DO NOT BE MISLED by the terms "low voltage"and "low potential". Voltages and potentials as low as 50 volts can cause death.
- Remove or tape all your exposed personal metal objects when working on C-E equipment.

## CAUTION

Devices such as CMOS, INOS, -VXOS, HEOS, thin-film resistors PNOS, and MSOFET used in many equipments can be damaged by static voltages present in most repair facilities. Most of the components contain internal gate protection circuits that are partially effective, but sound maintenance practice and the cost of equipment failure in time and money dictate careful handling of all electrostatic sensitive components.

Volume levels at the handset/headset/earphone/loudspeaker must be adjusted to the minimum levels required for operation. The volume control should be adjusted from the minimum position up to a comfortable level. Prolonged excessive volume will lead to hearing loss.

**Remarks:** None

**Notes:** None

### Performance Steps

1. Obtain required tools and test equipment. (TM 11-6625-3300-10)
2. Complete appropriate blocks on DA Form 2407. (DA PAM 750-8)
3. Perform visual inspection.
4. Set up test equipment. (TM 11-6625-3300-10.)
5. Verify the symptom(s), perform operational tests.
6. Proceed to PS# 12 if Unit Under Test(UUT) passes operational tests. If UUT fails, start troubleshooting PS #7.
7. Perform troubleshooting procedures. (TM 11-6625-3300-10)
8. Identify the defective circuit card(s) or component(s).
9. Replace the defective circuit card(s) or component(s).
10. Verify the repair.
11. Perform operational tests. (TM 11-6625-3300-10)
12. Complete DA Form 2407. (DA PAM 750-8)
13. Tag defective part(s) for turn in. (DA PAM 750-8)
14. Request final inspection upon completion of task. (Refer to local SOP)

(Asterisks indicates a leader performance step.)

**Evaluation Guidance:** Score the Soldier GO if all performance measures are passed (P). Score the Soldier NO-GO if any performance measure is failed (F). If the Soldier fails any performance measure, show what was done wrong and how to do it correctly.

**Evaluation Preparation:** Ensure all items required in the condition statement (or appropriate substitutions) are on hand and all safety requirements are met.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Obtained required tools and test equipment.			
2. Completed appropriate blocks on DA Form 2407.			
3. Performed visual inspection.			
4. Set up test equipment.			
5. Verified the symptom(s), performed operational tests.			
6. Proceeded to PS# 12 if Unit Under Test(UUT) passed operational tests or continued to PS #7 if UUT failed.			
7. Performed troubleshooting procedures.			
8. Identified defective circuit card(s) or component(s).			
9. Replaced defective circuit card(s) or component(s).			
10. Verified the repair.			
11. Performed operational tests.			
12. Completed DA Form 2407. (Refer to DA Pam 750-8.)			
13. Tagged defective part(s) for turn in.			
14. Requested final inspection. (Refer to local SOP.)			

**Supporting Reference(s):**

Step Number	Reference ID	Reference Name	Required	Primary
	DA FORM 2404	EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET	No	No
	DA FORM 2407	MAINTENANCE REQUEST	Yes	No
	LOCAL SOP	LOCAL SOP	Yes	No
	PAM 750-8	The Army Maintenance Management System (TAMMS) Users Manual.	Yes	No
	TB 385-4	SAFETY REQUIREMENTS FOR MAINTENANCE OF ELECTRICAL AND ELECTRONIC EQUIPMENT	Yes	No
	TM 11-5821-356-23	AVIATION UNIT AND INTERMEDIATE MAINTENANCE MANUAL FOR RADIO SET AN/ARC-164 RADIO RECEIVER-TRANSMITTERS RT-1145F, RT-1167, RT-1167A, RT-1167B, RT-1167C, RT-1167G, RT-1167H, RT-1504, RT-1518, RT-1518A, RT-1	Yes	No
	TM 11-5821-356-23P	Aviation Unit and Intermediate Maintenance Repair Parts and Special Tools List for Radio Set AN/VRC-164 (V)	No	No
	TM 11-6625-3300-10	Technical Manual Operator's Manual for Plug-in Unit, Electronic Test Equipment	No	No

**Environment:** Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT. It is the responsibility of every Soldier and DA civilian to protect the environment from damage. All operations must conform to the Army Environmental Program, TC 3-34.489 (The Soldier and the Environment), FM 3-34.5 (Environmental Considerations), and local, state, and federal environmental policies, the Clean Air Act (CAA), CAA amendments, National Ambient Air-Quality Standards (NAAQS), as well as Occupational Safety and Health Administration (OSHA), Hazard Communication Standard for Industry, 29 CFR, part 1910.

**Safety:** In a training environment, leaders must perform a risk assessment in accordance with ATP 5-19, Risk Management. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination. Incidental to Army operations and activities, all operations must provide for public safety, safe and healthful work places, procedures, and equipment. Observe all safety precautions when using lifting devices and handling heavy parts. Observe all safety and/or environmental precautions regarding electricity, radiation, radio frequency (RF), fuel, lubricants, high pressures, and refrigerants. Provide ventilation for exhaust fumes during equipment operation and use hearing protection when required in accordance with AR 385-10, (The Army Safety Program) the Clean Air Act (CAA), CAA amendments, National Ambient Air-Quality Standards (NAAQS), and the Occupational Safety and Health Administration (OSHA) Hazard Communication standard.

**Prerequisite Individual Tasks :** None

**Supporting Individual Tasks :** None

**Supported Individual Tasks :** None

**Supported Collective Tasks :** None